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Author: Grażyna Mendecka

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Grażyna Mendecka
Poland

Rewards and Punishments Used by Parents and Development of Creativity

Abstract

Family influences the personalities of all its members by creating conditions for individual development. As it also influences the development of creative personality, it was investigated to what extent rewards and punishments used by parents influence the development of children's creative abilities. A diagram explaining the way family enhances creativity was made and verified. It was based on M. Tyszkowa's paradigm, which makes a cognitive interpretation of ecological theories possible. Also, the theory of psychosocial phases in individual development by E. Erikson was used as well as his description of conflicts, which are characteristic of each phase. It was assumed that appropriate conditions of development allow to avoid serious conflicts and to cope with tasks in each phase of development. The results show a co-relation between the development of creative abilities and parents' reactions to the activities that children aged 8–9 perform on their own in order to check their own competence. The research examined two groups of children, who obtained extremely high and low scores in the creativity test: high creativity group and low creativity group. Each group consisted of 30 children, presenting analogic features. The children's level of creative abilities was measured with J. Zborowski's Test. The projective test was used to investigate the forms of reward and punishment used by parents. The results of the research show that the development of creative abilities depend on rewards and punishments used in family. The role of father is particularly important in this context.

Key words: *children's creative abilities, creative development, rewards and punishments used by parents*

Creativity and creative personality

In psychology, there are four approaches to creativity (R. Mooney 1963, .W. Taylor, 1988), each of them taking different aspects into account: 1) the creative environment, or 2) the creative product, or 3) the creative process, or 4) the creative person.

Due to those aspects of creativity, there are many definitions. G.W. Taylor (1988) specified six definition categories, according to what is insisted on, e.g. cognitive process features, products obtained or self-expression. For example, the definition by B. Ghiselin (1955), defining creativity as a “process of change, of development, of evolution, in the organization of subjective life” belongs to the last category. Focusing on the result, L.R. Harmon (1956) prefers to refer to it as “any process or an object, including a new form or arrangement of old elements”.

Synthesizing different definitions, one may say that creativity is the capacity of a human being to transform oneself and the surrounding world according to individual ideas. Every creative idea is the result of an intellectual activity. Since creativity is a new configuration of old elements, it requires particular personality features - first of all being courageous enough to destroy the ancient world order as well as being capable of taking risk to create a new one. Thus, creativity requires a sense of independence, which is related to self-confidence, self-esteem and strong ego. The research on creative personality shows that creators have the above-mentioned features (Albert, 1983; Barron & Harrington, 1981; Trzebiński, 1976, 1978). The research by A. Roe (1975) on scientists proves their high level of independence, which showed already in their childhood as a tendency to solve problems on their own. M.I. Stein (1968) listed the features most commonly used by psychologists to describe creative people. He mentioned, among others: independence, autonomy, self-sufficiency, capacity to resist internal and external pressure, a lack of inhibitions and embarrassment. Also T.Z. Tardif & R.J. Stenberg (1988) made a record of features characteristic of creative people, mentioned by different authors. Among others, they mentioned the capability to make independent judgments, to question norms and assumptions.

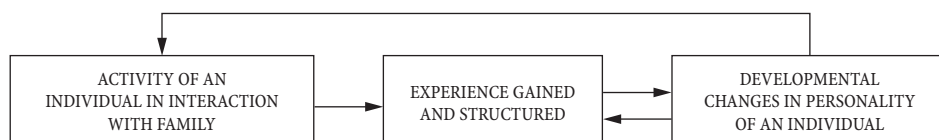
In the psychology of creativity it is emphasized that nonconformity of an individual is very important. Actually, in the case of group pressure it is decisive as far as the success of creative achievement is concerned. This personality feature allows to resist a particularly strong pressure exerted by the group on the creative person. E.P. Torrence (1965) proved in his research that already at school creative pupils are punished for being different and they are often not accepted by their school-mates. Creative individuals remain nonconformist, despite pressure, thanks to the fact that a high level of creative abilities goes with a belief in internal control.

Development of creative personality in family – theoretical model

Family influences, to a large extent, the development of creative personality. A creative person has strong ego and an internal sense of control, he/she is independent, self-reliant and easily resists group pressure. Ecological theories present the psychic development of a human being as “development-in-context” (U. Bronfenbrenner, 1977). The context of the development of a human being is the surroundings shaped and strongly influenced by the culture, values and norms respected by society, of which family makes part.

Ecological conceptions consider family as a particularly important context of the development of a child, adolescent and adult. Family is a social group and its members have very close, in most cases positive emotional relations. Ecological theories emphasize the importance of individual activity in the process of development, which provokes a vivid emotional reaction of family members. The socio-emotional bonds in family are a rich source of punishments and rewards, which enforce or limit the activity of an individual.

The essence of the development of a human being is the process of organizing one's own experience, which is the basis of psychic development (M. Tyszkowa, 1985, 1993, 1996). According to the paradigm of human development in the family context by M. Tyszkowa (1993, 1996), activity is considered as a source and one of the most important factors of psychic development. The experience one gains performing an activity and in the process of interpersonal communication is the variable which influences both the activity of an individual in their surroundings and the changes in their mind and behaviour. This experience, in the cognitive, affective and evaluative aspect, is structured or restructured and incorporated into the psychic structures of an individual, provoking developmental changes. Schematically, this looks as follows:



The relations showed in the scheme are of circular character – personality features influence the kind of activity performed by an individual and the way of structuring experience, which results in particular changes in personality.

Family influences the development of an individual in two ways. First of all, enabling an individual to be active and to gain experience. Secondly, showing

cultural patterns and ways of gaining experience in cognitive and emotional aspects, as well as in terms of values. In this way one learns to perform social roles and acquires, in the process of gradual internalization, social and moral values one should follow. Thus, the whole process of personality development is strongly influenced by family (M. Tyszkowa, 1996), which concerns also the development of creative personality in family surroundings.

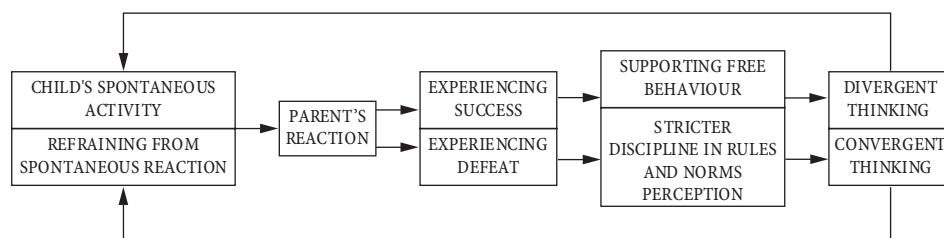
Subject and goal of the research, hypotheses

In the theory of psychosocial development by E. Erickson, it was established that the sense of independence, which is so important for creative personality, is formed already at the age of two or three, when children try for the first time to become independent of their parents. The success in overcoming the crisis of this developmental phase results in a sense of independence and self-esteem. However, if parents influence a child's activity during this period, applying too strict and firm rules, the child is ashamed, which may result in a lack of confidence in self-control.

During the phase, which comprises the age of four and five, initiative is the basic need of a child. Getting to know their surroundings they plan new activities, as their own independence and its expression is no longer enough for them. They need to interfere in the surroundings. They are already able to focus on the aim and plan how to achieve it. According to E. Erikson (1963) a child develops anticipation of roles and a sense of competition in this phase. The feedback to their activity children get from their family may evoke satisfaction or guilt.

The school age, when children are from six to eleven, enables them to acquire knowledge and skills characteristic of the culture they live in. The vitality of this period is induced by the need for adequacy, which confirms their competence and that they act properly. At this point of development, a child is psychically ready to perform serious tasks, such as those performed by adults when they work. A child strives to gain recognition for their activity such as performing a task or making an object. Erikson (1963) claims that this period determines the personal attitude of a child towards work. In this period parents have to appreciate the effort of a child to perform an activity. The interaction between parents and a child should enhance the child's capacity to value their work and themselves. It enables them to use their own creative potential and divergent thinking, while performing tasks and achieving aims. Lack of parent's acceptance may evoke a sense of inferiority and inadequacy. A. Nalaskowski (1998) further discusses the problem of forming the creative attitude with reference to the theory of psychosocial development by E. Erickson. The model presenting the influence of parents' reaction to a child's

spontaneous activity in the aspect of creating favourable conditions for the development of divergent thinking is as follows:



The model was verified by the research presented in this paper. The research investigated parents' reaction to a child's activity, which was aimed at proving a child's own competence, when the task performed by the child on their own initiative incurred some kind of a loss. In other words, the study examined a child's experience in family, when an independent action results in a loss or when a child violates rules or norms, which should be observed. An attempt was made to establish whether and to what extent, the parents of children with a high level of divergent production react differently, than the parents of children with a low level of divergent production.

The study concerned the creative abilities of eight and nine year-old children, i.e. the divergent thinking ability along with rewards and punishments used by their parents when children, acting on their own, produce not only positive results, but also a loss or when they break rules. The aim of the research was to find if parents' behaviour and the rewards and punishments used by them influence the level of creative abilities of a child, who, according to E. Erickson's theory of psychosocial development, is in the phase dominated by the need for adequacy confirming their competence and capacity to perform tasks. Assuming that such a relation exists the following hypotheses were verified:

- 1) The children with a high score in the creative abilities test are less frequently punished by their parents than the children with a low score.
- 2) The parents of the children with a high score in the creative abilities test use less restrictive punishments in comparison with the parents of the children with a low score.
- 3) The proportion of rewards to punishments used by the parents is more favourable in the case of the children with a high score in the creative abilities test compared with the group of children with a low level of creative abilities.

Method and procedure of the research, participants

Children's level of creative abilities was measured with J. Zborowski's Test (1986) for young children of school age. The test consists of 15 problems testing verbal, associational, expressive and conceptual fluency. The examples of problems are as follows: What is an apple – water – a notebook like? (associational fluency). What do you use a stick – a piece of paper – a wheel for? (conceptual fluency). The test is meant for individual use. For each problem the author stated the time taken in the test trial and the scoring principles.

In the second part of the research the projective test was used to investigate the forms of reward and punishment used by parents. Short stories were read to the children and they were asked to finish them and to predict the way their parents might have reacted in similar situations. Here are some examples of the stories:

Krzyś wanted to surprise his parents and did up the apartment. While putting a beautiful bunch of wild flowers in his mother's favourite vase he broke it by accident. What did his mother do when she saw it? What did his father do when he found out about it?

Tomek was on holidays at the seaside with his parents. One day, he did not come for dinner. His parents were worried and they started to look for him. It turned up that Tomek was on the beach with his friend. They had been building a sand castle. The castle was really beautiful, but they had to work on it for a long time. Tomek was so busy that he forgot about dinner. What did Tomek's mother do when she saw him? What did his father do?

In the first of the stories parents' reaction to a child's initiative is contrasted with a material loss, which was the cost of the independently undertaken task. In the second case the cost consisted in breaking a rule: not coming to dinner. Children's accounts were analyzed to establish whether in the situation given the parents reward effort and effect or punish the children for the loss and whether there is a difference between the parents of children with high and low creative abilities.

The procedure of the research was as follows. The research was carried out in the second grade of the primary school in a city in an industrial zone. The total of 178 schoolchildren aged eight and nine was examined. The research was conducted individually. Since it was carried out in the pedagogical unit in every school, the children stayed on the premises they were familiar with. At the same time it was a peaceful place and somehow separated from the place of their everyday work. The children were first given Zborowski's test and were then asked to complete the stories. The children were interested in the tests and willing to answer the questions.

For the purpose of the analysis, two groups were formed: 1) “high creativity” group (HCG) and 2) “low creativity” group (LCG). The first group consisted of the children who obtained the score from 7 to 10 stens in the creative abilities test. The second group consisted of the children with score 1–4 stens. Each group consisted of 30 children. The children were chosen according to their sex and age and the level of their parents’ education. These variables were identical in both groups in order to control the influence on the results obtained by the children. Both parents of each child had the same level of education. In the high creativity group the parents of nine children were college graduates. The remaining parents finished secondary school. In the low creativity group the parents of eight children were college graduates, the remaining parents finished secondary school.

Results concerning rewards and punishments

The total of 60 children was examined – 30 children in both high and low creativity group. Since each child talked about ten stories, the total of 1200 reactions of mothers and fathers in different situations was obtained. Each situation could result in either rewarding or punishing the child. The parents’ reactions, as perceived by the children, are shown in Table 1.

Table 1. Parents’ reactions to the activity of a child in the more and less creative group

PARENTS’ REACTIONS:	HCG Number %		LCG Number %		chi-square	Importance of differences df = 1
Mother:						
punishment	165	55	177	59	0.97	ni
reward	80	27	69	23	1.08	ni
persuasion	38	13	23	7	4.10	p < 0.05
no reaction	17	5	31	11	4.43	p < 0.05
Father:						
punishment	127	42	152	51	4.18	p < 0.05
reward	94	31	63	21	8.29	p < 0.01
persuasion	46	16	20	6	11.50	p < 0.001
no reaction	33	11	65	22	12.48	p < 0.001

According to the data presented in Table 1 the most frequent reaction of mothers and fathers in both groups was punishing the child. It concerns half of the parental reactions. The fathers of the children from the high creativity group are an exception, as they punished their children least frequently. The mothers of the

children from the high creativity group were different from the mothers of the children from the low creativity group only as far as the frequency of two types of reactions is concerned. In the first group mothers talked to the children more frequently, explaining their claims while in the other group lack of reaction or ignoring the child was more common. "Mum told Tomek she was scared when he didn't come to dinner, because something might have happened", "Mum told Krzys: 'You have to be careful when you do up the apartment because you can break something. Sometimes the things you have at home are valuable and it's a pity when you break them'". In the less creative group when asked about mother's reaction 11% of the children said, "Mum won't do anything" or "She won't say anything".

In the case of fathers substantial differences appeared in the perception of all their reactions by the children in both groups. The children from the high creativity group were punished less frequently and rewarded more frequently by their fathers. Also, they talked to their children much more often than the fathers of the children from the low creativity group, who much more often ignored their children and did not react in any way to their activity. Thus, the results of the research prove that the fathers of the children from the high creativity group provided much more positive experience to their children than mothers. The results of their reactions are contrasted in Table 2.

Table 2. Reactions of mother and father from the more creative group to the activity of their child

REACTION:	Mother Number %		Father Number %		chi-square	Importance of differences df = 1
punishment	165	55	127	42	5.33	p<0.05
reward	80	27	94	31	1.58	ni
persuasion	38	13	46	16	0.88	ni
no reaction	17	5	33	11	15.90	p<0.001

According to the data in Table 2, even though fathers ignored their children more often than mothers, they punished them less often. Fathers slightly more often rewarded their children and talked to them. Thus, children with higher scores in the creative abilities test perceived more positive reactions in their fathers than in their mothers. However, as both parents influence the atmosphere in family, the reactions of both mothers and fathers in the children's perception were analyzed together. The results are shown in Table 3.

Table 3. Differences in the reactions of parents from both groups to their child's activity

Reaction of parents	HCG Number%		LCG Number%		chi-square	Importance of differences df=1
punishment	292	49	329	55	4.56	p<0.02
reward	174	29	132	22	7.73	p<0.01
persuasion	84	14	43	7	14.80	p<0.001
no reaction	50	8	96	16	16.50	p<0.001
Total:	600	100	600	100		

According to the data in Table 3, the parents of the children from the high creativity group less frequently provided unpleasant experience and more frequently provided pleasant experience in the context of their children's activity. They punished and ignored their children less often and rewarded them more often as well as explained to their children what they did not like about their behaviour. So, they were less restrictive when the children caused a loss or broke a social rule while performing an activity important for themselves. Positive and negative reinforcement was also compared in the current analysis. Positive reinforcement is presented in Table 4.

Table 4. Positive reinforcement used by mothers and fathers of the children from both groups

Type of reward:	HCG Number %		LCG Number %		chi-square	Importance of differences df = 1
Mother:						
approval	40	50	36	48	0.07	ni
tender gesture	35	44	23	37	1.69	ni
material reward	5	6	10	15	2.78	ni
Total:	80	100	69	100		
Father:						
approval	43	46	30	48	0.05	ni
tender gesture	44	47	23	37	0.09	ni
material reward	7	7	10	15	2.77	ni
Total:	94	100	63	100		

According to the data in Table 4, there was no substantial difference in the types of reward used by the fathers or mothers from both groups. The most common reward used by both mothers and fathers was approval. Both mothers and fathers from the low creativity group used material reward as positive reinforcement twice

as often as parents from the high creativity group, but this difference is not statistically significant.

Positive reactions of the parents from both groups, shown in Table 5, proved that the children from the high creativity group statistically less frequently received material reward from their parents for their activity. The parents from the high creativity group showed their satisfaction with a tender gesture more often, compared with the low creativity group. Less than 0.40 is missing to make this difference statistically important.

Table 5. Differences in the positive reinforcement used by the parents of the children from both groups

Type of reward	HCG Number %		LCG Number %		chi-square	Importance of differences df = 1
approval	83	48	66	50	0.15	ni
tender gesture	79	45	46	35	3.45	ni
material reward	12	7	20	15	5.46	p<0.02
Total:	174	100	132	100		

In the analysis of negative reinforcement, at first the reactions of the mothers and fathers were compared separately and then the parents' reactions were shown together. The punishments used by the mothers and fathers are presented in Table 6.

Table 6. Negative reinforcement used by mothers and fathers from both groups

Type of reinforcement:	HCG Number %		LCG Number %		chi-square	Importance of differences df = 1
Mother:						
shouting	59	36	78	44	2.45	ni
corporal	49	30	52	29	—	ni
restrictions	27	16	16	9	4.16	p<0.05
making ashamed	30	18	31	18	—	ni
Total:	165	100	177	100		
Father:						
shouting	29	23	75	49	20.79	p<0.001
corporal	28	22	53	35	5.52	p<0.02
restrictions	41	32	20	13	14.81	p<0.001
making ashamed	29	23	4	3	27.07	p<0.001
Total:	127	100	152	100		

According to the data in Table 6, the parents reacted with shouting most frequently in the situations described to the children. This reaction was most common for the fathers from the low creativity group and least common for the fathers from the high creativity group. The only statistically important difference between the mothers appeared in the case of restrictions, which were more frequently used in the high creativity group. The fathers from the high creativity group used shouting and corporal punishment much less often. However, they used restrictions and making the children ashamed more often than the fathers from the low creativity group did.

The punishments used by both parents are compared in Table 7

Table 7. Negative reinforcement used by parents in both groups

Type of punishment	HCG Number %	LCG Number %	chi-square	Importance of differences df = 1
shouting	8 830	15 347	17.23	p<0.001
corporal	7 726	10 532	2.26	ni
restrictions	6 823	3 611	16.70	p<0.001
making ashamed	5 921	3 510	10.88	p<0.001
Total:	292 100	329 100		

Only in the case of corporal punishment the reactions of both parents were not different. A quarter of the children's initiatives incurring offence provoked such a reaction in the high creativity group, while in the other group corporal punishment occurred in 30% of the parental reactions. The parents' most frequent reaction in the low creativity group was shouting. In the high creativity group restrictions were more common as well as making the child ashamed.

Discussion

Assuming that the process of organizing one's own experience is the essence of the psychic development of man, the experience of a child acquired in family was analyzed. Undertaking an activity on their own initiative, which allows them to use their competence, they suffer its costs - a loss or breaking social rules. The goal of the research was to find if there is a difference in the reactions of parents whose children are on the opposite ends of the continuum of creativity - who obtained either very high or low results in the creativity test. According to the parents' reactions to the children's activity, they experience success or defeat. Since the participants of the research were eight and nine-year-old children, according to

E. Erickson's theory of psychosocial development, they were in the phase where vitality is strengthened by the need for adequacy – the need to confirm one's own competence. In this phase, children's self-esteem and value of their work depend on their parents' reactions.

The use an individual makes of his/her creative potential depends on the way he/she is rewarded and punished (E. Nęcka, 1999, p.168). Taking this into consideration, a diagram of gaining experience which influences divergent thinking was created. It was assumed that its verification will be positive if the results of the research confirm the hypotheses. According to the hypotheses, the parents of the more creative children punish them less frequently than the parents of the less creative children. The punishments they use are less restrictive and they use rewards more often than punishments.

The results of the research showed that parents punish their children most frequently when they act on their own. The parents whose children are more creative punish them less often than the parents whose children are less creative. However, parents' most desired reaction is either reward or persuasion, as parents should present their point of view to the child. The research proved that such a reaction was much more frequent in the case of more creative children (43%) than in the case of less creative children (29%). Chi-square for this difference is as high as 24.89 – the difference is statistically significant ($p < 0.001$; $df = 1$). The results confirm the first and the third hypotheses.

It should be emphasized that the children from the high creativity group were rewarded more frequently than punished mainly thanks to their fathers, whose reactions in this respect were much different from the reactions of the fathers from the low creativity group (Table 2). The results confirmed that fathers influence the development of their children's creativity to a larger extent (Mendecka, 1993, 2000, 2003).

The second hypothesis concerned the strictness of punishment. It is difficult to say if the punishments in the low creativity group were stricter than those in the high creativity group. Although corporal punishment was used less frequently in the high creativity group than in the low creativity group, the difference was not statistically significant. The parents in the high creativity group shouted at their children less often, and the difference is statistically significant. Shouting seems to be less severe than corporal punishment. However, this is false, since both show that parents do not cope with the problem and do not control their emotions. Shouting at their children or hitting them is an expression of their helplessness. Regardless of the cause (sometimes they simply may want to humiliate their child) both reactions are harmful to family life, because shouting and hitting is a sign of hostility and rejection for a child. Parents' shouting is not always of a restrictive

character, though. If the relations between the child and the parents are close, such a reaction of the parents can make the child conscious of the need to change their behaviour. As a result, shouting may stir children's creativity, but only as far as socialization, so conformity to rules, is concerned. This influences favourably the development of convergent, not divergent thinking. Thus, shouting limits the development of creativity in children, which was proved by the research.

The parents of the children from the high creativity group made their children ashamed more often than the parents of the children from the low creativity group. This was particularly evident in the case of fathers. Making ashamed seems to be a more lenient form of punishment than shouting or hitting. In fact, the child feels worthless and humiliated. Parents, making the child conscious of their fault, reproach their lack of competence: "How such a big boy could have broken a vase!", "I thought that children like you don't hurt their knees anymore – now I think you wouldn't be accepted in a kindergarten!". Such negative reinforcements inhibit children's use of their competence. A child's own activity is restricted and this does not happen because of their independent decision. This mechanism is similar to what happens in the case of advertising or indoctrination - it limits creative activity (Nęcka, 1999). The current research proves that the parents of the more creative children use different forms of punishment than the parents of the less creative children. However, the punishments they use are equally strict, so the second hypothesis was not confirmed.

The results of the current research show that there is a difference in the way parents treat children with a different level of creativity. So, a further study on the differences in punishments used by parents of children with a high and low level of creativity is worth making. The research by MacKinnon (1978) proves that the scientists, writers and architects, who were particularly creative, were quite severely punished by their parents. The forms of punishment they used structured the children's life and made them conscious of the rules observed by the whole family.

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